

**INFORMATION
DISCLOSURE
STATEMENT**

Atty. Docket No.: 150,0088 0103

Serial No.: 10/042,025

Applicant(s): Denderian et al.

Confirmation No.:

Filing Date: 25 October 2001

Group: 2818

U.S. PATENT DOCUMENTS

Examiner Initial	Copy Enclosed	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
PD		5,068,199	11/26/91	Sandhu	—	—	
✓		5,130,172	07/14/92	Hicks et al.	—	—	
		5,130,885	07/14/92	Fazan et al.	—	—	
		5,314,727	05/24/94	McCormick et al.	—	—	
		5,318,920	06/07/94	Hayashide	—	—	
		5,342,800	08/30/94	Jun	—	—	
		5,352,488	10/04/94	Spencer et al.	—	—	
		5,372,849	12/13/94	McCormick et al.	—	—	
		5,372,962	12/13/94	Hirota et al.	—	—	
		5,392,189	02/21/95	Fazan et al.	—	—	
		5,427,974	06/27/95	Lur et al.	—	—	
		5,510,651	04/23/96	Mamjar et al.	—	—	
		5,520,992	05/28/96	Douglas et al.	—	—	
		5,555,486	09/10/96	Kington et al.	—	—	
		5,566,045	10/15/96	Summerfelt et al.	—	—	
		5,561,307	10/01/96	Mihara et al.	—	—	
		5,581,436	12/03/96	Summerfelt et al.	—	—	
		5,608,247	03/04/97	Brown	—	—	
		5,612,560	03/18/97	Chivukula et al.	—	—	
		5,696,011	12/09/97	Figura	—	—	
		5,763,633	06/09/98	Vaartstra	—	—	
		5,874,364	02/23/99	Nakabayashi et al.	—	—	
✓		5,877,063	03/02/99	Gilechrist	—	—	
PD		5,935,648	08/10/99	Roberson et al.	—	—	

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PD		5,959,327	09/28/99	Sandhu et al.	—	—	
		5,962,065	10/05/99	Weimer et al.	—	—	
		5,962,716	10/05/99	Uhlenbrock et al.	—	—	
		5,980,983	11/09/99	Gordon	—	—	
		5,985,714	11/16/99	Sandhu et al.	—	—	
		5,990,559	11/23/99	Marsh	—	—	
		6,015,743	01/18/00	Zahurak et al.	—	—	
		6,037,220	03/14/00	Chien et al.	—	—	
		6,049,101	04/11/00	Graettinger et al.	—	—	
		6,060,367	05/09/00	Sze	—	—	
		6,060,351	05/09/00	Parekh et al.	—	—	
		6,063,705	05/16/00	Vaartstra	—	—	
		6,074,945	06/13/00	Vaartstra et al.	—	—	
		6,078,072	06/20/00	Okudara et al.	—	—	
		6,114,557	09/05/00	Uhlenbrock et al.	—	—	
		6,133,159	10/17/00	Vaartstra	—	—	
		6,197,628	03/06/01	Vaartstra et al.	—	—	
PD	X	6,281,125	08/28/01	Vaartstra et al.	—	—	

FOREIGN PATENT DOCUMENTS

Examiner Initial	Copies Enclosed	Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
PD		JP 10163131	06/19/98	Japan (Abstract)				
PD		WO 0022658 A	06/20/00	PCT				
PD	X	WO 01/95376	12/13/01	PCT				

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OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

Examiner Initial	Copy Enclosed	Document Description
PD		Anderson et al., "Carborane Complexes of Ruthenium: A Convenient Synthesis of $[\text{Ru}(\text{CO})_2\text{Cp}]^+[\text{7,8-C}_2\text{B}_9\text{H}_{11}]^-$ and a Study of Reactions of This Complex," <i>Organometallics</i> , 14, 3516-3526 (1995).
		Aoyama et al., "Chemical Vapor Deposition of Ru and Its Application in (Ba,Sr)TiO ₃ Capacitors for Future Dynamic Random Access Memories," <i>Jpn. J. Appl. Phys.</i> , 38:2194-2199 (1999).
		Bai et al., "Low-temperature growth and orientational control in RuO ₂ thin films by metal-organic chemical vapor deposition," <i>Thin Solid Films</i> , 310, 75-80 (1997).
		Bennett et al., "Mono-olefin Chelate Complexes of Iron(0) and Ruthenium(0) with an Olefinic Tertiary Phosphine," <i>J. Chem. Soc. D</i> , 7, 341-342 (1971).
		Cowles et al., "Relative Reactivity of Co-ordinated Ligands in the Dienyltricarbonyl-ruthenium Cation, $[\text{dienylRu}(\text{CO})_3]^+$," <i>Chemical Commun.</i> , 392 (1969).
		Green et al., "Chemical Vapor Deposition of Ruthenium and Ruthenium Dioxide Films," <i>J. Electrochem. Soc.</i> , 132, 2677-2685 (1985).
		Igumenov, "MOCVD of Noble Metals," <i>J. De Physique IV</i> , 5, C5-489-C5-496 (1995).
		Johnson et al., "Chemistry," <i>Nature</i> , 901-902 (1967).
		Kaeszi et al., "Low-Temperature Organometallic Chemical Vapor Deposition of Transition Metals," <i>Mater. Rev. Soc. Symp. Proc.</i> , 131, 395-400 (1989).
		Kawahara, Fukaaki et al., "(Ba, Sr)TiO ₃ Films Prepared by Liquid Source Chemical Vapor Deposition on Ru Electrodes," <i>Jpn. J. Appl. Phys.</i> , 35: 4880-4885 (1996).
		Liao et al., "Characterization of RuO ₂ thin films deposited on Si by metal-organic chemical vapor deposition," <i>Thin Solid Films</i> , 287, 74-79 (1996).
PD		Macchiioni et al., "Cationic Bis- and Tris-(2-pyrazol-1-yl) methane Acetyl Complexes of Iron(II) and Ruthenium(II): Synthesis, Characterization, Reactivity, and Interionic Solution Structure by NOESY NMR Spectroscopy," <i>Organometallics</i> , 16, 2139-2145 (1997).

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PD ↑		Nakamura et al., "Embedded DRAM Technology compatible to the 0.13µm high-speed Logics by using Ru pillars in cell capacitors and peripheral vias," <i>IEEE</i> , (1998).
		Park et al., "Metallorganic Chemical Vapor Deposition of Ru and RuO ₂ Using Ruthenocene Precursor and Oxygen Gas," <i>J. Electrochem. Soc.</i> , 147 :203-209 (2000).
		Senzaki et al., Chemical Abstract 128:264103, <i>Proc. Electrochem. Soc.</i> , 97:25 (Chemical Vapor Deposition), 933-43 (1997).
		Shin, "Characterization of RuO ₂ Thin Films Prepared by Hot-Wall Metallorganic Chemical Vapor Deposition," <i>J. Electrochem. Soc.</i> , 144 , 1055 (1997).
		Sosinsky et al., "Hydrocarbon Complexes of Ruthenium. Part IV. Cyclic Dienyl Complexes", <i>J. Chem. Soc.</i> , 16-17 , 1633-1640 (1975).
		Takagi et al., "RuO ₂ Bottom Electrodes for Ferroelectric (Pb, La/Zr, TiO ₂) Thin Films by Metalorganic Chemical Vapor Deposition", <i>Jpn. J. Appl. Phys.</i> , 34 , 4104-4107 (1995).
		Versteeg et al., "Metalorganic Chemical Vapor Deposition By Pulsed Liquid Injection Using An Ultrasonic Nozzle: Titanium Dioxide on Sapphire from Titanium (IV) Isopropoxide," <i>Journal of the American Ceramic Society</i> , 78 , 2763-2768 (1995).
		Yuan, "Low-Temperature Chemical Vapor Deposition of Ruthenium Dioxide from Ruthenium Tetroxide: A Simple Approach to High-Purity RuO ₂ Films," <i>Chem. Mater.</i> , 5 , 908 (1993).
PD ↓		Yang, Doo Young et al., "Characterization of Ru Electrodes for Ru/Ba,Sr/TiO ₂ /Ru Capacitors," <i>Ferroelectrics</i> , 1996, ISAF '96: Proceedings of the Tenth IEEE International Symposium on Applications of Ferroelectrics" New York, NY, August 18, 1996; pgs. 515-518.

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